

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 April 2006 (27.04.2006)

(10) International Publication Number
WO 2006/043707 A1

(51) International Patent Classification:
H02J 1/02 (2006.01) *G05F 1/56* (2006.01)

(21) International Application Number:
PCT/JP2005/0 19641

(22) International Filing Date: 19 October 2005 (19.10.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-308369 22 October 2004 (22.10.2004) JP

(71) Applicant (for all designated States except US): **RICOH COMPANY, LTD.** [JP/JP]; 3-6, Nakamagome 1-chome, Ohta-ku, Tokyo, 1438555 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **NISHIDA, Junji** [JP/JP]; 10-3, Midorimachi, Neyagawa-shi, Osaka, 5720022 (JP).

(74) Agent: **ITOH, Tadahiko**; 32nd Floor, Yebisu Garden Place Tower, 20-3 Ebisu 4-chome, Shibuya-ku, Tokyo 1506032 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

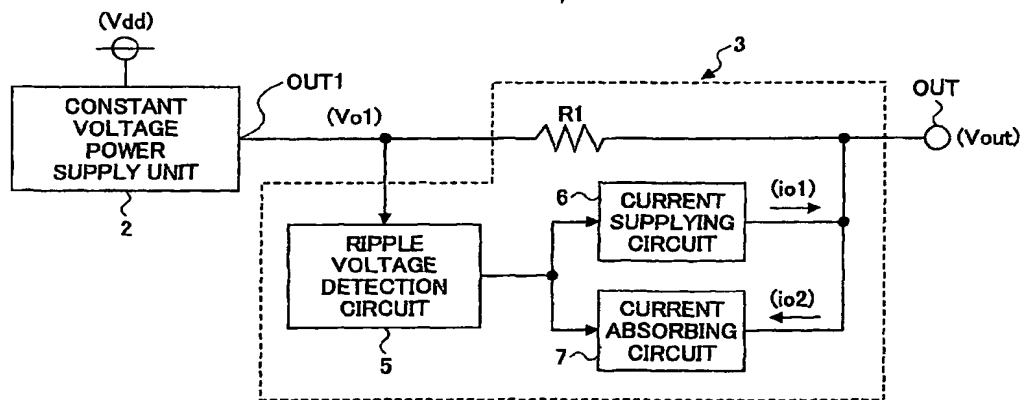
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A CONSTANT VOLTAGE POWER SUPPLY CIRCUIT



(57) Abstract: A disclosed constant voltage power supply circuit (1) has an input terminal (Vdd), an output terminal (Vout), a constant voltage power supply unit (2) that generates a constant voltage (Vo1) with a ripple voltage (Vri), and a ripple removing circuit unit (3) for removing the ripple voltage so that a constant voltage (V1) without the ripple voltage is output at the output terminal (OUT). The ripple removing circuit unit comprises a resistor (R1) connected between the constant voltage power supply unit and the output terminal; a ripple voltage detection circuit unit (5) for detecting the ripple voltage and outputting a signal depending on the detected ripple voltage; and a current circuit unit (6, 7) for receiving the signal from the ripple voltage detection circuit unit and supplying a current (io1) to the output terminal or absorbing a current (io2) from the resistor in response to the received signal, so as to cancel the ripple voltage at the output terminal.

WO 2006/043707 A1